

# **EXHIBIT H**

## **PART 1**

1 IN THE UNITED STATES DISTRICT COURT  
2 FOR THE WESTERN DISTRICT OF PENNSYLVANIA

4 TINA LINDQUIST,

) COPY

5 Plaintiff,

)

6

) No. 04-249E

7 HEIM, L.P.

)

8 Defendant.

)

9 The videotaped deposition of WILLIAM

10 SWITALSKI called for examination pursuant to Notice  
11 and the Rules of Civil Procedure for the United  
12 States District Courts pertaining to the taking of  
13 depositions, taken before DEANNA AMORE, a notary  
14 public within and for the County of Cook and State  
15 of Illinois, at 33 North LaSalle Street, Chicago,  
16 Illinois, on the 7th day of April, 2006, at the  
17 hour of 8:00 a.m.

18

19 CSR No. : 084-0003999

20

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24

1 APPEARANCES:

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3 MR. DALLAS W. HARTMAN

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7 Representing the Plaintiff;

8 MEYER, DARRAGH, BUCKLER, BEBENEK & ECK,

9 P.L.L.C., by,

10 MR. PAUL R. ROBINSON

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15 Representing the Defendant.

16 ALSO PRESENT:

17 Karolina Tesarski, Videographer

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1	I N D E X	
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1 THE VIDEOGRAPHER: My name is Karolina  
2 Tesarski, legal video specialist with McCorkle  
3 Court Reporters located at 200 North LaSalle  
4 Street, Suite 300, Chicago, Illinois 60601.  
5 I am the camera operator on April 7, 2006, for the  
6 videotaping of the deposition of William Switalski  
7 being taken at 33 North LaSalle, Chicago, Illinois,  
8 at the time of 8:08 a.m. in the matter of Tina  
9 Lindquist, plaintiff, versus Heim L.P., defendant,  
10 filed in the United States District Court, Western  
11 District of Pennsylvania, Case No. 04-249E.

12 Will counsel please identify themselves  
13 for the record beginning with the plaintiff's  
14 counsel?

15 MR. HARTMAN: Yes, my name is Dallas Hartman.  
16 I represent Tina Lindquist.

17 MR. ROBINSON: Good morning, my name is Paul  
18 Robinson. I represent the defendant, Heim, L.P.

19 THE VIDEOGRAPHER: Will the reporter please  
20 identify herself and swear in the witness?

21 THE COURT REPORTER: Deanna Amore.

22 (Witness sworn.)

23 MR. HARTMAN: For the record would you please  
24 state your name?

1 THE WITNESS: William G. Switalski.

2 WILLIAM SWITALSKI,

3 called as a witness herein, having been first duly  
4 sworn, was examined and testified as follows:

5 EXAMINATION

6 BY MR. HARTMAN:

7 Q. Would you give us your current business  
8 address, Mr. Switalski?

9 A. Yes, it is 4228 Commercial Way in  
10 Glenview, Illinois.

11 Q. And how long have you been at that  
12 address?

13 A. Approximately two years.

14 Q. And what is your current profession?

15 A. I am a mechanical engineer.

16 Q. And how long have you been a mechanical  
17 engineer?

18 A. Since May of 1980.

19 Q. I notice from your report that's dated  
20 March 13, 2002, that the firm you work with is  
21 Switalski Engineering, Inc.; is that correct?

22 A. Yes.

23 Q. Is that a company wholly owned by you?

24 A. Yes.

1 Q. And do you have any employees?

2 A. No, I don't.

3 Q. So Switalski Engineering, Inc., consists  
4 basically of you?

5 A. That's right.

6 Q. Prior to working for Switalski  
7 Engineering, Inc., by whom were you employed?

8 A. I was employed by Triodyne, Incorporated.

9 Q. And how long were you employed by  
10 Triodyne, Inc.?

11 A. I was just short of 24 years.

12 Q. And am I correct that Triodyne, Inc., is  
13 the company that's owned by Professor Barnett?

14 A. Yes.

15 Q. And during your 20-plus years of working  
16 with Triodyne, have you had the opportunity to work  
17 with Professor Barnett?

18 A. I have.

19 Q. Have you ever had your deposition taken  
20 before?

21 A. Yes, I have.

22 Q. You understand that I am going to be  
23 asking you questions and the court reporter is  
24 taking down your testimony; are you aware of that?

1 A. Yes.

2 Q. And you are also aware you are being  
3 videoed?

4 A. Yes.

5 Q. You are not represented by counsel, am  
6 I correct?

7 A. Correct.

8 Q. And you are here as an expert retained by  
9 Mr. Robinson on behalf Heim, L.P.; am I correct?

10 A. Yes.

11 Q. During the period of time that you worked  
12 with Triodyne, Inc., did you have the opportunity  
13 to work with Professor Barnett on cases involving  
14 foot pedals?

15 A. Yes.

16 Q. Can you tell us how many cases you worked  
17 with Professor Barnett?

18 A. I can only give you a guesstimate of the  
19 range of number of cases. Perhaps when we worked  
20 directly for a foot control manufacturer perhaps,  
21 oh, five to ten times, and when we worked for a  
22 manufacturer of mechanical power presses or power  
23 press brakes, the foot control may have been an  
24 issue another, you know, perhaps 10 to 20 times.

1           Q. Today do you specifically recall ever  
2 working with Professor Barnett on any cases  
3 involving a foot pedal and a press brake?

4           A. I am sure I have but no particular ones  
5 pop into my mind.

6           Q. Can you tell us what kind of foot pedal  
7 was involved when you worked with Professor Barnett  
8 on a case involving a power press -- excuse me -- a  
9 press brake and a foot pedal?

10          A. I can remember doing an inspection with  
11 Professor Barnett of a press brake with the older  
12 style mechanical pedal as well as the newer  
13 electric foot control.

14          Q. With regard to the electric foot control,  
15 how many cases have you worked with Professor  
16 Barnett on that involve that, press brakes and the  
17 electric foot control?

18          A. The combination of the two, perhaps  
19 anywhere from one to three.

20          Q. Do you remember the style of the foot  
21 control involved in the case?

22          A. Yes.

23           On at least one occasion the style of foot  
24 control was top cover only and then at least one

1 more case the style of foot control would have been  
2 top cover and side shields.

3 Q. And would that be the extent of the type  
4 of foot controls that you have been involved in  
5 with Professor Barnett that also included press  
6 brakes?

7 MR. ROBINSON: I will object to the form of the  
8 question.

9 THE WITNESS: I believe so.

10 BY MR. HARTMAN:

11 Q. So when you worked with Professor Barnett  
12 in evaluating the foot control as it relates to the  
13 interaction with the press brake, you have had top  
14 cover only and cover with side shields; am  
15 I correct?

16 A. I believe so, yes.

17 Q. Do you recall on the cases involving cover  
18 with side shields what the issue was?

19 A. No, I don't.

20 Q. Do you recall whether or not there was an  
21 evaluation done as to whether or not the foot pedal  
22 itself was the cause of the accident?

23 A. Because I can't recall the specific  
24 issues, I just don't know.

1 Q. Have you -- since you have been on your  
2 own with Switalski Engineering, Inc., other than  
3 this case, have you had the opportunity to evaluate  
4 a power -- excuse me -- a press brake in  
5 conjunction with the foot control?

6 A. No, this is the first project that came  
7 into Switalski Engineering with the combination of  
8 those two products.

9 Q. I think before we get started it is  
10 important for us to make sure we are talking the  
11 same type of terms.

12 Do you know what a press brake is?

13 A. Yes.

14 Q. What is a press brake?

15 A. A press brake is --

16 MR. ROBINSON: Hold on one second. I will  
17 object to the form of the question. But please  
18 don't ever concern yourselves with my objections.  
19 I have legal thoughts in mind and you can answer.  
20 But wait until I finish my objection and you can  
21 say whatever you want to say. Object to form.

22 BY MR. HARTMAN:

23 Q. Let me rephrase the question. Would you  
24 describe to me what your understanding of a press

1 brake is?

2 A. A press brake is one of several different  
3 kinds of machines in the metal working family. It  
4 is -- in particular it has a specialty which is the  
5 bending and shaping of sheet metal. It can be used  
6 for many other purposes in addition to that. But  
7 if someone has to bend especially larger sheets of  
8 sheet metal, they would pretty much be restricted  
9 to using a press brake to do that job.

10 Q. What is a power press or a punch press?

11 Are they the same thing to you?

12 A. Well, a power press can be either one. A  
13 power press, mechanical power press or power press  
14 brake, so the terminology power and press are  
15 common to both.

16 Q. Well, that's good because we need to  
17 understand what you understand it to be because  
18 during the course different witnesses have alluded  
19 different definitions to different things.

20 A. I see.

21 And the question that preceded that one  
22 now?

23 Q. Well, let's talk about what is a punch  
24 press?

1       A. A punch press is really a slang term for  
2 mechanical power press.

3       Q. So when we talk about a mechanical power  
4 press, we are talking about -- are you indicating  
5 that's what you are talking about punch presses and  
6 press brakes?

7       A. No, it would be strictly the punch press.

8       Q. So a mechanical power press would be a  
9 punch press?

10      A. Yes.

11      Q. A power press would include punch presses  
12 and press brakes?

13      A. Yes.

14      Q. And then the press brake, you have already  
15 defined that?

16      A. Yes.

17      Q. Okay. Describe for me what a mechanical  
18 power press is.

19      A. A mechanical power press can be used for a  
20 variety of different operations, the most common  
21 one probably being the punching operation and hence  
22 the term punch press. But it can also be used for  
23 forming, cleaning, blanking, piercing and bending  
24 just like the press brake but it would be

1 restricted to smaller items as opposed to large  
2 pieces of sheet metal.

3 Q. Are there two different standards that  
4 apply -- are there different standards that apply  
5 to mechanical power presses and press brakes?

6 A. Yes, there are.

7 Q. Do you know why there are different  
8 standards that apply to each?

9 A. Well, because the intended use of the  
10 machines differ to some degree and it mainly again  
11 has to do with the forming of sheet metal which is  
12 something that a press brake is much more capable  
13 of handling a much larger variety of sizes and  
14 shapes of sheet metal as opposed to the mechanical  
15 power press.

16 Q. Do you agree that the industry as a whole  
17 clearly distinguishes between mechanical power  
18 presses and press brakes?

19 A. Yes --

20 MR. ROBINSON: I will object to the form.

21 THE WITNESS: Yes, I do.

22 BY MR. HARTMAN:

23 Q. Would you describe for me the differences  
24 as you understand them to be in detail?

1           MR. ROBINSON: I will object to the form, also  
2       asked and answered.

3           THE WITNESS: I think the -- certainly one of  
4       the primary differences has to do with the concept  
5       of safe distance guarding. There is a concept that  
6       is recognized in the press brake safety standard  
7       called safe distance guarding particularly when a  
8       foot control is used.

9           The standard recognizes that some work pieces  
10       are so large that the operator has to stand several  
11       feet away from the point of operation while  
12       holding, supporting one's side of the large piece  
13       of sheet metal while the machine is cycled and it  
14       performs its bending operation. And in that case a  
15       foot pedal can be positioned several feet away from  
16       the machine.

17       The press brake standard requires that if a  
18       guarding device such as a physical barrier can be  
19       used, it must be used. Except the standard  
20       recognizes that there are some jobs performed with  
21       a mechanical press brake that are simply  
22       incompatible with guarding. So if a foot control  
23       is used, it is supposed to be placed a sufficiently  
24       large distance away from the machine that the

1 operator cannot physically reach in to the point of  
2 operation while the machine is cycling. You don't  
3 find that provision in the mechanical power press  
4 standard.

5 BY MR. HARTMAN:

6 Q. You are talking about difference in the  
7 standards but I am talking about differences in the  
8 machine types.

9 MR. ROBINSON: And that was -- if I may,  
10 I actually thought your question was relating to  
11 the machines, hence my asked and answered. But it  
12 was -- it did follow your question regarding the  
13 different standards. So then I was actually going  
14 to withdraw my -- I thought I was confused. So now  
15 I will object to it as asked and answered because  
16 he did tell you the differences earlier.

17 BY MR. HARTMAN:

18 Q. I want a listing of the differences of the  
19 machines themselves and the uses to which they are  
20 intended to be used.

21 MR. ROBINSON: Objection, asked and answered.

22 THE WITNESS: Okay. The physical appearance of  
23 a mechanical press brake versus the physical  
24 appearance of a mechanical punch press, the point

1 of operation in a punch press is generally  
2 three-dimensional. It has length, width and depth  
3 to the tooling and the operation that more often  
4 than not is going to be performed.

5 A mechanical press brake is basically a linear  
6 machining operation, for example, the press brake  
7 involved in Mrs. Lindquist's accident has a width  
8 of six feet. It can perform a bending operation up  
9 to six feet wide. The point of operation really  
10 doesn't have any depth to it. The machine is  
11 capable of making a bend in a piece of sheet metal  
12 along a line up to six feet left to right.

13 A punch press, for example, if I am going --  
14 I might be able to have an operation with a punch  
15 press, a mechanical power press or I am bending the  
16 same piece of metal in two or more places all at  
17 the same time. And although a piece of tooling  
18 might be designed to be able to do that and a  
19 mechanical power press too, generally the standard  
20 dyes for a mechanical press brake don't allow that.  
21 If you make two bends, you have to do two separate  
22 cycles of the machine and two different operations.

23 Q. It seems to me you have interchanged the  
24 terminology mechanical power press and press brake.

1 I am not trying to confuse you.

2 MR. ROBINSON: What's the question?

3 BY MR. HARTMAN:

4 Q. I am just asking --

5 A. If I misspoke, I don't realize it.

6 MR. ROBINSON: Read back the answer. I think  
7 you did misspeak. You might have been referencing  
8 a press brake.

9 (Whereupon, the record was  
10 read.)

11 THE WITNESS: No, I intended to say just what  
12 the court reporter read there.

13 MR. ROBINSON: I want to make sure.

14 BY MR. HARTMAN:

15 Q. Well, would you explain that to me?

16 MR. ROBINSON: We are on the record?

17 BY MR. HARTMAN:

18 Q. Would you explain that to me that last  
19 statement that you just said though you may be able  
20 to -- which operation can you do multiple forms --  
21 multiple bends at the same time?

22 A. That would be on the mechanical power  
23 press because of the three-dimensional nature of  
24 the dye space and most tooling whereas again with

1 the press brake what you are really performing are  
2 one-dimensional bends in pieces of sheet metal.

3 Q. So a press brake does one-dimensional  
4 bends, on a mechanical power press you can do  
5 multiple dimensions of bends if the tooling is  
6 correct?

7 A. Yes, right.

8 Q. Is there a difference in the speed between  
9 your typical press brake and power punch press?

10 MR. ROBINSON: I will object to the form.

11 THE WITNESS: Yes, there are typically some  
12 differences. A mechanical punch press is probably  
13 the fastest in that family of machines. The  
14 hydraulic press brake is probably the slowest in  
15 that family of machines, and the mechanical press  
16 brake is somewhere in the middle. So there is  
17 going to be some overlap in the speeds of  
18 mechanical press brakes and mechanical power  
19 presses.

20 BY MR. HARTMAN:

21 Q. What is the range of speed and cycles per  
22 minute that you are aware of with a press brake?

23 MR. ROBINSON: Object to the form.

24 THE WITNESS: As I recalled it, the press brake

1 in Ms. Lindquist's accident was designed to do a  
2 maximum of 30 cycles per minute or strokes per  
3 minute. Hydraulic press brakes, I think I have  
4 seen some really large ones that will go as slow as  
5 perhaps one cycle in five to ten seconds.

6       Mechanical power presses, I think we have  
7 encountered some that will do as many as 120  
8 strokes per minute, two strokes per second. So  
9 that's probably as good as I can do as far as  
10 giving you a feel for the general range of speeds.

11       Thirty-five cycles per minute is something that  
12 both the mechanical press brake as well as the  
13 mechanic power press will achieve.

14 BY MR. HARTMAN:

15       Q. You today have knowledge of mechanical  
16 power presses that have a cycle speed of 35 strokes  
17 per minute?

18       A. I am sure that I have been out on any  
19 number occasions with Professor Barnett and have  
20 inspected it, videotaped it, photographed them.

21       Q. Today do you have personal knowledge of  
22 any mechanical power press that operates at a speed  
23 of 35 cycles per minute?

24       MR. ROBINSON: Objection, asked and answered.

1 MR. HARTMAN: No, he says, he is sure he has --

2 MR. ROBINSON: You don't need to comment on my  
3 objection. I just made an objection.

4 BY MR. HARTMAN:

5 Q. Let me re-ask the question.

6 Do you today have personal knowledge of  
7 mechanical power presses that operate at  
8 35 revolutions per minute?

9 A. Other than knowing they exist, if you were  
10 to ask me to give you the address and the name of a  
11 company that owns one, I couldn't.

12 Q. Is that typical for a mechanical power  
13 press to operate at that slow of a speed?

14 MR. ROBINSON: I will object to the form,  
15 specifically the word slow.

16 BY MR. HARTMAN:

17 Q. Okay. Is it typical for mechanical power  
18 presses to operate at 35 revolutions per minute?

19 A. Yes.

20 Q. What would -- are you aware of what the  
21 average speed of mechanical power presses is in a  
22 cycles per minute basis?

23 A. No, I am not.

24 MR. ROBINSON: I will object to the form. If

1 you could give a pause after the questions. I want  
2 to make sure I am able to assert my objection to  
3 the form of that question.

4 THE WITNESS: All right. I am sorry.

5 MR. ROBINSON: That's my fault. I should have  
6 said that earlier.

7 BY MR. HARTMAN:

8 Q. Can you tell me -- today can you tell me  
9 the range from slow to the fastest operating speeds  
10 of mechanical power presses?

11 A. No, I cannot without researching that  
12 question.

13 Q. Have you ever researched that prior to  
14 today?

15 A. No, it has just never been an issue that  
16 I have needed to address.

17 Q. I forgot to ask it. I am sorry. Have you  
18 met with Mr. Robinson in the past 24 hours?

19 A. I have, yes.

20 Q. When was that?

21 A. Last evening.

22 Q. And how long were you with Mr. Robinson?

23 A. I am going to say two to three hours.

24 Q. Did you review your testimony for today in

1 preparation?

2 MR. ROBINSON: I will object to the form of the  
3 question.

4 THE WITNESS: We didn't talk about my  
5 testimony. I think I did most of the question  
6 asking.

7 BY MR. HARTMAN:

8 Q. Did the subject of Professor Barnett's  
9 testimony come up last night?

10 A. Yes, I brought it up.

11 Q. And what did you bring up about that?

12 A. Well, for starters I wanted to know if his  
13 testimony went to completion. I was -- I was  
14 curious with regard to anything that went above and  
15 beyond the scope of what Professor Barnett's report  
16 had covered. And in particular I was especially  
17 interested in how Professor Barnett handled the,  
18 certainly what I see as an inconsistency between  
19 the positions he took in this case versus some of  
20 the publications he wrote 15 to 20 years ago.

21 Q. Did you and Mr. Robinson talk about Mr. --  
22 Professor Barnett's distinguishing the difference  
23 between a power press, a -- excuse me -- a punch  
24 press and a press brake?

1 A. Yes.

2 Q. And did Mr. Robinson describe for you what  
3 Professor Barnett had said?

4 A. Yes.

5 Q. Did you agree or disagree with  
6 Mr. Robinson's description of what Professor  
7 Barnett said?

8 MR. ROBINSON: I will object to the form of  
9 that question. It makes no sense.

10 MR. HARTMAN: That's a fair objection. Let me  
11 withdraw that question.

12 BY MR. HARTMAN:

13 Q. What is your understanding of Professor  
14 Barnett's testimony as to the distinction between  
15 the mechanical power press, punch press and a press  
16 brake?

17 A. Well, with regard to the use of the front  
18 gated foot control --

19 Q. I am sorry. I am talking about with  
20 regard to the machine, the differences in the  
21 machines.

22 A. I believe the most significant differences  
23 in the machines that Professor -- that I was told  
24 Professor Barnett highlighted had to do with the

1 speed, mechanical power presses being faster and  
2 press brakes being slower.

3 Q. And you were also concerned in the  
4 inconsistency of -- what you believe the  
5 inconsistency of Professor Barnett's report and his  
6 prior publications, am I correct?

7 A. Yes.

8 Q. Have you read those prior publications?

9 A. I have.

10 Q. In fact with regard to a mechanical power  
11 press is there a particular type of clutch that you  
12 would encounter on this type of machine?

13 A. There are two different types of clutches  
14 on a mechanical power press and really the same  
15 would be true of a mechanical press brake as well.  
16 But there is a partial revolution clutch and a full  
17 revolution clutch associated with really either  
18 type of machine.

19 Q. Would you describe for us what a partial  
20 revolution clutch is?

21 A. A partial revolution clutch has the  
22 capability of being disengaged at any point during  
23 the operating cycle.

24 Q. And a full revolution?

1           A. A full revolution clutch does not have the  
2 capability of being disengaged. Once the cycle  
3 begins, it has to go through to its completion  
4 before the machine has an opportunity to stop.

5           Q. So on a full revolution when you hit the  
6 button goes all the way down or -- strike that.

7           On a full revolution clutch when you  
8 activate it, it has to go a complete cycle?

9           A. Yes.

10          Q. On a partial revolution it is activated  
11 only as long as you hit the button. If you let go  
12 of the source of activation, it stops?

13          A. Yes, depending on the operating mode.

14          Q. Explain that to me.

15          A. If, for example, a machine with a partial  
16 revolution clutch is being operated in the normal  
17 operating mode, which is called single stroke, the  
18 operator is required to hold the control activated  
19 through the closing portion of the machine cycle.  
20 The operator can then release the activating  
21 control and during the upstroke the machine will  
22 not stop. It will complete its full cycle.

23           On the other hand, if the operating mode,  
24 is, for example, the jog mode, which is typically

1 used during maintenance and set up, during the jog  
2 mode the operating control has to be held as long  
3 as the ram or the machine is cycling or stroking  
4 during either the upstroke or the downstroke. It  
5 doesn't matter. When you release the control, the  
6 machines stops at any point during the cycle.

7 Q. Okay. So on a partial revolution clutch  
8 it operates one of two ways, in a normal operating  
9 mode any time you attempt to deactivate it by its  
10 operating mechanism on the downstroke it will stop  
11 but once it reaches the downstroke it will recycle  
12 up by itself?

13 A. Generally, yes, yes.

14 Q. And then in the jog mode any time you let  
15 off the foot control or the -- whatever means you  
16 are using to activate it, it will stop, whether it  
17 is down or up?

18 A. That's correct.

19 Q. The full revolution requires a complete  
20 cycle?

21 A. Yes.

22 Q. Can you -- do you today know of any punch  
23 press that has a partial revolution clutch?

24 A. I don't think I would be out of line in

1 saying that virtually all punch presses that are  
2 made today would be expected to have a partial  
3 revolution clutch. The full revolution clutch is  
4 associated with much older equipment.

5 Q. In 1978 machinery that was made in 1978  
6 can you tell me of any punch press that was  
7 manufactured prior to 1978 that had a partial  
8 revolution clutch?

9 A. Virtually any press manufacturer would  
10 have made the partial revolution clutch at that  
11 time era. They were probably manufacturing both  
12 styles of clutches. Certainly the full revolution  
13 clutch would have still been more prevalent than it  
14 is today. But I think by 1978 everyone in the  
15 punch press business was probably making a machine  
16 or at least offered that as a clutch option.

17 Q. I understand you are saying that's what  
18 probably happened. I am asking do you have  
19 personal knowledge today of any manufacturer that  
20 manufactured a punch press with a partial  
21 revolution clutch at any time prior -- from 1978  
22 and before?

23 MR. ROBINSON: Objection, asked and answered,  
24 also object to the form.

1           THE WITNESS: I am going to say no, I couldn't  
2        swear to it because it was, you know, before I was  
3        out of engineering school. I really didn't have  
4        the interaction with industry prior to 1978.

5        BY MR. HARTMAN:

6           Q.    Okay. That's fine. But prior -- so you  
7        don't know the -- what punch press operators were  
8        doing with regard to partial and full revolution  
9        clutches prior -- from 1978 and before?

10          MR. ROBINSON: Objection. That isn't his  
11        answer. He said virtually all of them would have  
12        offered it. He can't specifically identify for you  
13        a manufacturer that offers it. So, objection,  
14        asked and answered, misleading.

15          THE WITNESS: Maybe this will help to further  
16        clarify. I have in my file here the 1971  
17        mechanical power press standard. The standard has  
18        a section in it of rules that apply to full  
19        revolution clutches and a section that applies to  
20        partial revolution clutches. So certainly they  
21        were both in frequent enough use that the code  
22        committee addressed both. If there were no partial  
23        revolution clutches around yet, the standard would  
24        simply be silent on them.

1 MR. ROBINSON: I didn't hear the year,

2 Mr. Switalski. What year standard?

3 THE WITNESS: '71.

4 MR. ROBINSON: 1971, thank you.

5 BY MR. HARTMAN:

6 Q. With regard to mechanical press brakes,  
7 are you aware of any manufacturer prior to 1978 --  
8 excuse me -- prior to 1979 -- let me rephrase that  
9 so it is clear.

10 With regard to mechanical power -- strike  
11 that.

12 With regard to press brakes are you aware  
13 of any manufacturer prior to 1979 that offered a  
14 full revolution press brake?

15 A. No, I don't have any personal knowledge of  
16 it.

17 Q. Is there anything in the ANSI standard of  
18 19 -- what ANSI standard would have applied to a  
19 press brake manufactured in 1978?

20 A. I don't believe there was a press brake  
21 standard before 1982.

22 Q. Okay. So do you have any information  
23 today that press brake manufacturers offered full  
24 revolution press brakes prior to 1979?

1       A. I can pull out the 1982 standard for press  
2       brakes. And again if it similarly has a section in  
3       it on full revolution clutches or another section  
4       on partial revolution clutches, it would be  
5       certainly an extremely strong indicator that both  
6       styles of clutches existed prior to 1982.

7       Q. Look at the standard and see if it exists.

8       MR. ROBINSON: I am sorry. Look at the  
9       standard and what?

10      MR. HARTMAN: See if it has that provision.

11      MR. ROBINSON: Let me object to the form of the  
12     question. It appears Mr. Switalski is doing this  
13     but we all could do this as well and review the  
14     standard that is approximately one-inch thick.

15      THE WITNESS: Okay. I believe I did misspeak  
16     in my last -- one of things I said was that the  
17     1982 was the first press brake standard. It was  
18     not. It was 1973.

19      But I have looked at both the 1973 and the  
20     1982. Neither one of them have a section regarding  
21     the full revolution clutch.

22    BY MR. HARTMAN:

23      Q. So would you agree then that since the  
24     ANSI standard doesn't discuss full revolution

1      clutches on press brakes that it was unlikely that  
2      manufacturers were including them on press brakes  
3      in that era?

4            MR. ROBINSON: I will object to the form of  
5      that question.

6            THE WITNESS: I would agree.

7      BY MR. HARTMAN:

8            Q. In your report you indicated that you were  
9      a proctor and helped Professor Barnett on his foot  
10     control testing; is that correct?

11          A. Yes, and I was one of the test subjects as  
12     well.

13          Q. Would you describe what your -- your  
14     involvement was at that time?

15          A. Yes, in 1979 I took a course that  
16     Professor Barnett taught at the Illinois Institute  
17     of Technology in design for mechanical safety. In  
18     conjunction with that class Professor Barnett was  
19     already conducting some foot switch research where  
20     a variety of different styles and manufacturers of  
21     foot switches were brought to the class and all of  
22     the students would activate each one of the variety  
23     of foot switches. And at that time as a student,  
24     I was one of the individuals who participated in

1 that research.

2 BY MR. HARTMAN:

3 Q. In looking at that research have you had  
4 the opportunity to review the results of that  
5 research?

6 A. Yes.

7 Q. Do you agree with the results of that  
8 research?

9 A. Yes, I do.

10 Q. Would you describe for me what the -- what  
11 was attempted to be gleaned from the information of  
12 that research project?

13 A. What had occurred in the industry  
14 particularly with regard to the foot switches is  
15 the foot switch guarding evolved from no cover over  
16 the pedal at all to a top cover only, then to a top  
17 cover with side shields and then Linemaster in  
18 particular came out with a concept with the toe  
19 latch that had to be depressed at the rear of the  
20 pedal before the pedal could be depressed and  
21 virtually every manufacturer of foot switches  
22 started to come out with a front gate. Virtually  
23 all of the front gates were hinged at the top with  
24 the single exception of the Allen Bradley foot

1 controlled which was hinged at the bottom.

2 So the research that Professor Barnett was  
3 conducting at the time had to do with the  
4 effectiveness as a safety device particularly of  
5 the front gate concept but it also addressed the  
6 effectiveness as a safety device of the side  
7 shields on foot switches as well.

8 BY MR. HARTMAN:

9 Q. What research was done with regard to that  
10 paper?

11 A. Basically each test participant was asked  
12 to activate each style of foot switch as fast as  
13 they could and the number of times each participant  
14 was able to activate the foot switch in, say, a  
15 60-second period was tabulated, which allowed the  
16 foot switches to be ranked from slowest to fastest.

17 The foot switches with no covering at all  
18 tended to be the ones that could be most quickly  
19 activated, the most activations in one minute of  
20 time.

21 The foot switch with the front gate that  
22 hinged at the bottom, which would be Allen Bradley  
23 product, turned out to be the foot switch with the  
24 fewest activations per minute. In other words the

1 presence of the front gate slowed down the cycle  
2 time when the user was required to completely  
3 remove the foot out of the foot control between  
4 every activation.

5 There was another method of activating  
6 foot controls with no side shields. Rather than  
7 stepping on the pedal by insert your foot, take  
8 your foot out, insert your foot, take your foot  
9 out, there was another pivoting method where the  
10 person would keep their heel on the ground and  
11 pivot into the foot switch from the side. That  
12 could only be done if there was no side shield.

13 There was a theory proposed that a press  
14 operator was less likely to have difficulty with  
15 their balance while standing when activating with  
16 the pivoting foot motion from side to side,  
17 remaining on their heel versus where you had to  
18 pick your foot up every time and put it into, bring  
19 it out of the switch.

20 The research results did not support the  
21 idea that there was better operator balance using  
22 the pivoting versus what I will call the  
23 reciprocating foot method. But the research also  
24 showed that because of the -- with regard to the

1 front gated foot switch, the research showed that  
2 because of the added difficulty that operators  
3 would have getting their foot into the foot  
4 control, they were less likely to remove their foot  
5 from the foot control between activations and that  
6 gave rise to a condition or a misuse that has been  
7 tagged with the name riding the pedal.

8 Q. What research --

9 MR. ROBINSON: Were you -- was your answer  
10 complete, Mr. Switalski?

11 THE WITNESS: I think so.

12 BY MR. HARTMAN:

13 Q. I thought so too. I am sorry.

14 MR. ROBINSON: I just wanted to make sure.

15 BY MR. HARTMAN:

16 Q. What research -- strike that.

17 What test results gave rise to the belief  
18 that or the opinion that when the front gate was on  
19 the foot pedal the operator would tend to leave  
20 their foot in it? What -- what gives rise to that  
21 conclusion?

22 A. The observations after I became an  
23 employee of Triodyne. Professor Barnett and  
24 I frequented many different press metal working

1 plants throughout the country. It was a regular  
2 observation that when foot switches were in use  
3 that had the front gate, one, either the gates were  
4 taped open or spring held open or that the press  
5 operators were simply leaving their foot inside the  
6 switch all the time to avoid the extra work, extra  
7 hassle, extra difficulty, whatever have you, of  
8 getting your foot back into the pedal for each  
9 cycle of the machine.

10 BY MR. HARTMAN:

11 Q. Nowhere in the studies that I have read is  
12 there any indication that the results and  
13 conclusions that were obtained in the paper, that  
14 were put down on paper were based on observations  
15 outside of the test subjects. Are you telling me  
16 that that was introduced into the papers?

17 A. I am almost sure that one or more of  
18 Professor Barnett's foot switch publications make  
19 reference to field observations.

20 Q. Okay. Can you tell me what paper that  
21 would be?

22 A. I am going have to start looking through  
23 them individually.

24 Q. We are going to go through them

1 individually later. So we will do that at that  
2 time.

3 A. Okay.

4 Q. How often have you been with Professor --  
5 how many times did you accompany Professor Barnett  
6 on field observations?

7 A. It had to be well into the hundreds.

8 Q. Those hundreds of times were in  
9 anticipation of preparing a report?

10 A. I think every field inspection certainly  
11 had that potential, yes.

12 Q. Are you aware of any field observation  
13 that found its way into a report?

14 MR. ROBINSON: Objection, asked and answered.  
15 You just told him you were going to get to that  
16 later. Specifically he said he would have to look  
17 through the actual reports to confirm it but he  
18 thought so.

19 MR. HARTMAN: I am asking him is he aware of  
20 any particular field observation that found its way  
21 into a report.

22 THE WITNESS: Well, yes, in fact there was one  
23 inspection that particularly sticks out in my mind  
24 because I am virtually positive that Professor

1 Barnett wrote about it in one of his papers and  
2 that was the observation that we found a press  
3 operator -- because I was the one that pointed it  
4 out Professor Barnett -- who operated the press in  
5 such a way that he kept his -- he kept the pedal  
6 pushed down all the time.

7 And when he wanted the machine to cycle, he  
8 would release the pressure on the foot pedal and  
9 then stand back on it. So in effect what he was  
10 doing was using the single stroke circuitry logic  
11 of the machine to allow the machine to stop rather  
12 than the removal of his foot from the activating  
13 control to stop the machine.

14 BY MR. HARTMAN:

15 Q. Well, once you take your foot off the  
16 activating control, doesn't it stop the machine?

17 A. Yes, but this operator was keeping his  
18 foot on the pedal all the time.

19 Q. Well, wouldn't that be a continuous stroke  
20 method?

21 A. No, because the punch press has a single  
22 stroke capability which forces you to at some point  
23 release the activating control before you get a  
24 subsequent cycle of the machine. So the -- it was

1 a demonstration of how critical the reliability of  
2 the single stroke circuitry built within the  
3 machine had to be.

4 Q. Well, correct me if I am wrong, the single  
5 stroke is, goes down and up, am I correct, a  
6 complete stroke?

7 A. Yes.

8 Q. A continuous stroke is when you hit the  
9 pedal it continues?

10 A. Another feature of a single stroke,  
11 however, is that if the operator depresses and  
12 holds down the activating means, the machine will  
13 cycle once and only once. You get a single stroke.  
14 And if the operator fails to release the activating  
15 means in the single stroke mode, he will still get  
16 one single stroke. But it is not the set of  
17 electrical contacts in the two-hand control or the  
18 foot switch that are now stopping the machine. It  
19 is the internal circuitry logic built into the  
20 control that is telling the machine to make only  
21 one stroke. So there is a different set of  
22 electrical contacts being taxed to accomplish that  
23 end than what is normally done by releasing the  
24 activating means.

1 Q. That's the one. Any other situations you  
2 recall that found its way into a report?

3 A. That was a misuse of a foot control that  
4 I think both of us observed for the first time on  
5 that particular inspection. And certainly it made  
6 enough of an impression apparently on Professor  
7 Barnett that he wrote about it in a publication and  
8 it made enough of an impression on me that I never  
9 forgot about it either.

10 Q. Did that foot control have a gate?

11 A. I don't recall. I don't recall if it did  
12 or not.

13 Q. And that was on a power press?

14 A. Yes, it was.

15 Q. Excuse me. A punch press because a power  
16 press could be either according to you?

17 A. Yes, but the one we observed was on a  
18 punch press.

19 Q. When did you leave employment with  
20 Professor Barnett at Triodyne?

21 A. I believe at the end of March 2004.

22 Q. Am I correct you did that to start your  
23 own business?

24 A. Yes -- well, there were more reasons than

1 just starting my own business but certainly that  
2 event was concurrent with leaving Professor  
3 Barnett.

4 Q. I would like to know the reasons.

5 A. Okay. I had already been involved in  
6 another business. I happened to co-own a bowling  
7 center. At that same time my partner who is the  
8 active person operating the bowling center on a  
9 day-to-day basis wanted to take his first steps  
10 towards retirement.

11 So I knew that the demand on my time was  
12 going to increase with respect to the bowling  
13 center. I also knew that Professor Barnett was  
14 instituting some changes within Triodyne that were  
15 likewise going to increase the number of hours that  
16 employees were expected to work.

17 And because I just did not feel that the  
18 two could coexist satisfactorily at the same time,  
19 I decided that it was time to perhaps leave  
20 Triodyne, do this on my own and really a  
21 combination of multiple events going on in my life  
22 that led to the decision to leave.

23 Q. But it was basically -- I am just trying  
24 to make sure I cover all of the bases -- it was a

1 lifestyle change, not a professional falling out  
2 between you and Professor Barnett?

3 A. No, not at all. As a matter of fact to my  
4 surprise and a very pleasant surprise, despite  
5 Professor Barnett asking me to send letters to the  
6 clients on every file I was handling and allowing  
7 me to take files with me when the client said we  
8 would like the file to remain with Bill Switalski,  
9 my expectation was on the files where clients said  
10 we want the file to remain with Triodyne because we  
11 expect Professor Barnett to ultimately testify,  
12 Professor Barnett asked me to take even the files  
13 that he was going to be testifying with me. And we  
14 have had a very good working relationship as those  
15 files have reactivated over the course of the last  
16 two years.

17 Q. Because this is litigation, I have to ask  
18 questions just to make sure that there is no,  
19 nothing that you felt that Professor Barnett was  
20 doing wrong or any -- that caused you to leave.  
21 I am just trying to clarify it was just --

22 A. No, not at all. It was a more amicable  
23 separation than I had hoped for.

24 Q. Okay. So you were treated fairly?

1 A. Yes, I was.

2 Q. And during the course of your working with  
3 Professor Barnett, would you agree that he conducts  
4 himself in a professional manner?

5 MR. ROBINSON: Object to the form of the  
6 question.

7 THE WITNESS: Yes.

8 BY MR. HARTMAN:

9 Q. Would you agree that you have never  
10 witnessed or encountered anything that was  
11 unethical?

12 MR. ROBINSON: Object to the form of the  
13 question.

14 THE WITNESS: Unethical, no.

15 Professor Barnett and I did disagree from time  
16 to time when it came to professional opinions on  
17 some matters. And on those instances it was simply  
18 that there was something in a report that Professor  
19 Barnett would sign that I disagreed with,  
20 I wouldn't cosign the report with him and that was  
21 the end of it. It didn't mean we couldn't work  
22 together amicably any more.

23 BY MR. HARTMAN:

24 Q. Again, I am just making sure that, for the

1 record, I am not trying to imply anything. But  
2 when you have a long history like the two of you  
3 had, it is just I need to find out if there is  
4 something that you know that I should know; and  
5 this is a discovery deposition. That's the purpose  
6 of it.

7 A. I understand.

8 Q. Am I correct as of today you are not able  
9 to determine what model foot pedal accompanied the  
10 Heim press brake that was involved in this  
11 accident?

12 A. Well, the only input information I have is  
13 what is in this file documentation; and I have seen  
14 some photographs that were taken while the press  
15 was still at Cory Manufacturing. I understand that  
16 after Cory closed or after the machine went through  
17 a used machinery dealer, the foot switch was  
18 disposed of. And, unfortunately, even the foot  
19 control in use at the time of the accident wasn't  
20 particularly well documented before it was disposed  
21 of.

22 And from the testimony of the in-house  
23 Heim personnel that was taken, they didn't seem to  
24 have any way of confirming exactly what foot

1 control accompanied the new machine. So I really  
2 don't have any more information than what other  
3 witnesses have been able to piece together.

4 I certainly have some knowledge of what  
5 Linemaster's product looks like because Linemaster  
6 was a client of mine and Professor Barnett's for  
7 many years while I was at Triodyne. We did a  
8 number of litigation projects for Linemaster.

9 Q. Would you agree that in 1977 Linemaster  
10 manufactured a foot control that had a kick plate?

11 A. Now by kick plate you mean the front gate  
12 as opposed to the toe latch?

13 Q. It is called -- some people have called it  
14 kick plate, toe latch and they call the front gate  
15 the front gate. What do you call the thing that  
16 prevents your foot from going into the cover?

17 A. I have been calling it the gate, the front  
18 gate.

19 Q. And what do you call the mechanism at the  
20 back of the pedal that you have to hit so that the  
21 pedal will allow the pedal to go down, the toe  
22 latch?

23 A. I have been calling it a toe latch.

24 I believe Linemaster calls it an anti-trip latch.